

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 September 2005 (15.09.2005)

PCT

(10) International Publication Number
WO 2005/084967 A1

(51) International Patent Classification⁷: **B60C 23/00**,
F16K 15/20, 31/00

(21) International Application Number:
PCT/EP2005/001667

(22) International Filing Date: 18 February 2005 (18.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PCT/IB04/000502
27 February 2004 (27.02.2004) IB

(71) Applicant (for all designated States except US): **PIRELLI PNEUMATICI S.P.A.** [IT/IT]; Viale Sarca, 222, I-20126 Milano (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CARETTA, Renato** [IT/IT]; Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT). **PIANTANIDA, Pier, Giuseppe**

[IT/IT]; Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT). **SGALARI, Giorgia** [IT/IT]; Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT). **FILIPPI, Massimo** [IT/IT]; Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT).

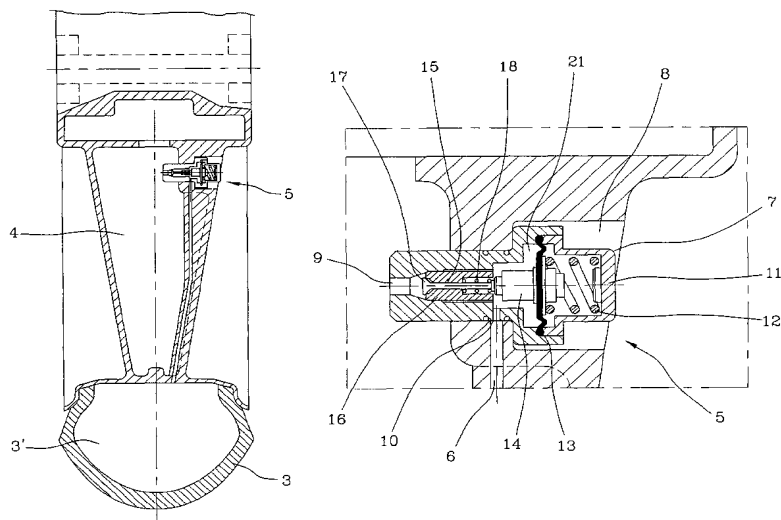
(74) Agents: **BOTTERO, Carlo** et al.; Pirelli & C. S.p.A., Viale Sarca, 222, I-20126 Milano (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: WHEEL HAVING TEMPERATURE COMPENSATED AND CONTROLLED PRESSURE



(57) Abstract: It is disclosed a wheel (1) having a controlled and compensated pressure comprising: a rim (2) associated with a tank (4) adapted to be filled with a fluid to a first pressure; a tyre (3) mounted on said rim and having an inner volume (3') inflated to an operating pressure, said operating pressure being lower than said first pressure; at least one valve (5) adapted to regulate a communication between said tank (4) and the inner volume (3') of said tyre (3); said valve (5) comprising at least one elastic element operatively associated with a closure member (17) designed to open and close a port (9) of said valve (5) to bring said tank (4) into communication with said tyre (3), when the pressure of said tyre (3) is lower than said operating pressure, said elastic element having an elastic constant (K) showing a variation of 10% to 40% within a temperature range included between about -50°C and about 50°C.

WO 2005/084967 A1



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*